

REMARKS/ARGUMENTS

Claims 1-41 are pending herein. Claim 1 has been amended as supported by page 18, line 18 to page 20, line 11, or page 21, line 28 to page 28, line 23 of the original specification, for example. Claims 3-5, 7, 8, 12, 13, 15, 18, 19, 22, 23, 25, 28 and 30-34 have been amended for clarification purposes only.

1. The Examiner's claim suggestion on page 2 of the Office Action is noted. The phrase "is formed of said convex part..." appearing in lines 2 and 3 of claim 15 (as amended above) has been changed to --comprises a convex part--.

2. Claims 1, 3-37 and 39-41 were rejected under §102(b) over Oweis et al. To the extent that this rejection might be applied against amended claim 1 (and all claims depending therefrom), it is respectfully traversed.

Pending independent claim 1 recites, among other things, a lithium secondary cell including positive and negative electrode collectors having predetermined parts that are joined to arranged edges of the positive and negative electrode metallic foils, respectively. Pending claim 1 has been amended in order to clarify that, prior to joining the metallic foils to the collectors, the predetermined parts of the collectors are thicker than remaining parts of the collectors. The applied prior art of record, discussed below, does not disclose or suggest this claimed feature.

Applicants discovered that the use a collector having a specific shape (e.g., the thicker predetermined parts) at the portion of the collector that is joined to the metallic foils results in better bonding between the metallic foils and the collector. This is so because the energy beams used to bond the collector to the metallic foils penetrate into and are confined mainly within the thicker portion of the collector, and thus the energy beams are not substantially conducted away from the thicker portion into the thinner portions of the collector.

Concentrating the conduction of heat in the thicker portion of the collector enhances the melting of that portion of that collector (e.g., the thicker predetermined parts) that is joined with the metallic foils, which, in turn, advantageously provides a more secure and reliable joint between the collector and the metallic foils.

Oweis discloses a current collecting structure used in connection with a wound electrode body. All of the drawings in Oweis show that current collection tabs 8, which are bonded to portions of electrodes 4, have a uniform thickness prior to being bonded with the electrodes. Therefore, when Oweis' current collection tabs are bonded to the electrodes, heat conduction occurs in a uniform manner throughout the main body of the collection tabs and, as such, is not concentrated mainly in the portions of the collection tabs that are bonded to the electrodes.

As discussed above, pending independent claim 1 has been amended in order to clarify that, prior to joining the metallic foils to the collectors, the predetermined parts of the collectors are thicker than the remaining parts of the collectors. As such, the collectors, as claimed, do not include a uniform thickness prior to joining with the metallic foils, as is the case with the current collection tabs disclosed in Oweis. Again, the shape of the claimed collector prior to bonding with the metallic foils causes a higher heat concentration in that portion of the collector (i.e., the thicker predetermined part) that is joined to the metallic foils, which, in turn, beneficially provides a better joint between the collector and the metallic foils. Oweis simply does not disclose or suggest that predetermined parts of the collectors are thicker than remaining parts of the collectors, as claimed, and the attendant advantages thereof. That is, the claimed lithium secondary cell having thicker predetermined parts of the collectors prior to joining the collectors to the metallic foils provides a structurally distinct cell over the cell structure disclosed in Oweis.

In view of all of the foregoing, reconsideration and withdrawal of the §102(b) rejection over Oweis are respectfully requested.

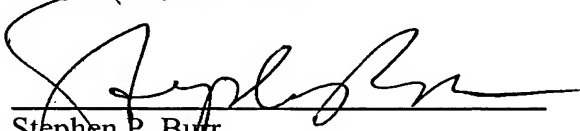
3. Claim 38 was rejected under §103(a) over Oweis. Applicants respectfully submit that the arguments submitted above distinguish claim 1 from Oweis. Since claim 38 depends directly from claim 1, claim 38 is also believed to be allowable over Oweis.

4. Claim 2 was rejected under §103(a) over Oweis in view of Watanabe. Applicants respectfully submit that the arguments submitted above distinguish claim 1 from Oweis. Since Watanabe does not overcome the deficiencies of Oweis, and since claim 2 depends directly from claim 1, claim 2 is also believed to be allowable over the applied prior art of record.

If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,



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Date

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